

RESEARCH PROBLEM STATEMENT #EV-505

I – Problem Title

The effects of construction activities on Valley Elderberry Longhorn Beetle habitat

II – Research Problem Statement

The Department of Transportation (Department, Caltrans) is required to mitigate for effects from highway projects on the federally threatened valley elderberry longhorn beetle (VELB). The effects of construction and maintenance activities on elderberry are not well documented and the Department is frequently asked to mitigate for perceived impacts that may not be significant. Caltrans needs specific information to assess the effect of construction generated dust on the habitat of the VELB.

III – Objective

Identify and describe the significant transportation activities that affect VELB habitat and VELB, such as maintenance trimming and construction dust generation. Prepare a literature review and summarize relevant knowledge. Identify environmental assessment indicators or factors useful in assessing potential impacts and appropriate compensation or mitigation under the federal Endangered Species Act (ESA). Conduct necessary studies to quantify the nature and magnitude of transportation construction impacts to VELB and their relative importance to long-term survival and recovery of the species, and recommend relevant and appropriate mitigation measures.

This research will support the Department's performance goal of improving transportation project delivery. Our values of innovation, communication, partnership, and stewardship are also reflected in this study.

IV – Background

The VELB is a key species to consider during the environmental assessment phase of a project located within the Sacramento, Central and San Joaquin Valleys. The Department is regularly asked to mitigate for effects (habitat loss, dust, shading) to this species.

The current mitigation requirements are not founded upon scientific investigations, yet these requirements are costly to the Department and diminish its funding base for other natural resource stewardship efforts that may be more deserving. Seasonal construction work windows are commonly employed as avoidance mitigation, often resulting in motorist and project delivery delays. Knowledge of construction impacts on the species will give the Department and our partners the ability to plan appropriately for mitigation and limit the amount of mitigation that is performed to situations where impacts will actually occur.

V – Statement of Urgency and Benefits

Costs are increasing at a rapid rate (see table below). Science-based mitigation requirements and effects determinations will ultimately result in cost savings to the State. Over the past 13 years, there has been an increase in VELB-related costs for the Department in time and mitigation dollars:

PY and Mitigation Costs (in thousands of dollars)											
Year:	1990	'91	'92	'93	'94	'95	'96	'97	'01	'02	'03
	\$0	10	30	36	82	68	43	127	478	517	530

(Source: ESA Compliance Cost Data)

VI –Related Research

UC Davis entomologists (Marcel Holyoak, Theresa Talley, and Denise Piechnik), in partnership with Sacramento County Department of Regional Parks (Gary Kukkola, Peter Buck) and the Sacramento Area Flood Control Agency (SAFCA), as vested partners, along with partners Pacific Gas and Electric Co., Sacramento Metropolitan Utility District, Sacramento Regional County Sanitation District, and the Western Area Power Authority, have been studying the VELB since April 2002 in a power transmission context. While this research will be valuable to our maintenance activities, our transportation and construction activities have separate affects.

VII – Deployment Potential

The project will result in acceptable methods to forecast and mitigate the impacts of construction and maintenance activities to the species. It will be deployed as guidance to the biological staff in the Department and be made available to our transportation partners. There is an opportunity for us to assume a leadership role with the regulators and to objectively seek answers, which may assist other agencies and municipalities in compliance with the ESA.